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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/809,604	03/15/2001	Peter H. Markusch	Mo5944/MD-00-108-PU	4995

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EXAMINER
SALVATORE, LYNDA

ART UNIT	PAPER NUMBER
1771	

DATE MAILED: 09/03/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/809,604	MARKUSCH ET AL.	
	Examiner	Art Unit	
	Lynda M Salvatore	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 June 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-14 and 19-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-14 and 19-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. Applicant's amendment and accompanying remarks, Paper No. 5, have been entered. Claim 1 and 15-18 have been canceled, claims 2-14 and 21 have been amended, and claims 22-32 have been added. Applicant's amendment to claim 11 is found sufficient to overcome the 35 U.S.C. 112, second paragraph set forth in section 5 of the last Office Action. As such, this rejection is withdrawn. Applicant's arguments regarding the rejections of claims 1-6, 8-10, and 19-21 rejected under 35 U.S.C. 102(b), as set forth in section 8 of the last Office Action have been carefully considered and are found to be persuasive. As such, these rejections are withdrawn. However, despite this advance, Applicant's amendments and accompanying arguments are not found persuasive of patentability over the prior art of Markusch et al., and upon further consideration a new grounds rejection is set forth herein below.

Election/Restrictions

2. Applicant's election without traverse of Group I, claims 1-14 and 19-21, in Paper No. 5 is acknowledged.

Response to Arguments

Claim Rejections - 35 USC § 102/103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 2-6, 8-10 and 21 stand rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Markusch et al., US 5,558,917.

Applicant amended claims 2 and 21 to include the limitations of newly canceled claim 1 and claim 2. Applicant argues that the relied upon reference of Markusch et al., teaches the inclusion of fillers and a blowing agent content in an amount ranging from .1 to 10 weight percent, whereas the instantly claimed invention precludes the use of fillers and limits the blowing agent content (i.e., water) to no more than .1 weight percent. These arguments are not found persuasive on the grounds that it is the position of the Examiner that Markusch et al., meets the limitation of a blowing agent content of no more than .1 weight percent with an explicitly taught range end point of .1 weight percent. With regard to the inclusion of fillers, Markusch et al., does not explicitly teach the inclusion of fillers. Specifically, Markusch et al., recites that the polyol mixture *may* additionally comprise fillers (Column 5, 1-7). In another passage, Markusch et al., teaches it is *usually desirable* to include filler material, but nowhere does it explicitly teach the addition of filler to the polyol mixture is required. Thus, the Examiner asserts that such a disclosure does not constitute a positive teaching to the addition of filler material and for all intents and purposes the polyurethane composition of Markusch et al., appears to be equally effective with or without the *suggested* addition of filler material.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claim 7 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Markusch et al., US 5,558,917 as applied to claim 2 above, and further in view of Markusch et al., US 6,187,982 as set forth in section 11 of the last Office Action and no new arguments have been presented.

7. Claims 12 and 13 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Markusch et al., US 5,558,917 as applied to claim 2 above, and further in view of Turner et al., US 4,853,054 as set forth in section 12 of the last Office Action and no new arguments have been presented.

8. Claim 14 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Markusch et al., US 5,558,917 as applied to claim 2 above for reasons set forth in the last Office Action and no new arguments have been presented.

Claim Rejections - 35 USC § 102/103

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 19-28 and 32 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Markusch et al., US 5,558,917.

The patent issued to Markusch et al., teaches a polyurethane composition comprising an aromatic poly(phenyloisocyanate) prepared in a mixture with at least one low molecular weight organic compound having an average functionality ranging from 1.0 to 3.0 and at least one high

molecular weight polyol with 1 to 12 isocyanate reactive hydrogen atoms wherein the molecular weight ranges from 500 to 5000 (Column 3, 25-60 and Column 5, 9-20). The aromatic isocyanate generally have a viscosity of less than 500 mPa.s at 25 ° C and can have an isocyanate group content from 20-33 % (Column 2, 58-60 and Column 4, 35-58). Suitable low molecular weight polyols incorporated into the isocyanate as urethane adducts, include monoalcohols, diols, and triols, wherein the urethane content of the polyisocyanate is from about 2 to 6% (Column 3, 60-65 and Column 4, 26-34). Additionally, other suitable low molecular chain extending compounds include diols, triols, and alkanolamines such as ethanolamine and N-substituted diethanolamines (Column 7, 15-45). Suitable high molecular weight polyols include polyethers polyesters, and amine terminated polyethers having molecular weights ranging from 500 to 5000 (Column 5, 10-20). The polyurethane composition preferably comprises an organometalllic catalyst such as tin, lead or iron in an amount ranging from .001 to about 10 parts per 100 parts of isocyanate-reactive material (Column 7, 50-55 and Column 8, 39-45). Markusch et al., teaches that water may also be used as a blowing agent in an amount ranging from .1 to 10 weight percent (Column 9, 15-20). Markusch et al., teaches that the polyurethane composition may be applied as a uniform layer to a variety of substrates such as non-wovens and may be used in such applications as roofing membranes, sound dampening foams, and carpet padding (Column 9, 53-64).

The recited intended use of a geotextile in the preamble is not given patentable weight at this time since the prior art meets the structural and chemical limitations. The reference teaches applying the polyurethane composition as uniform layer to a variety of substrates. As such, since the Applicant fails to set forth the structure limitations of the geotextile it is the position of the

Examiner that a non-woven comprising said polyurethane coating could function in the desired capacity of a geotextile. The burden is upon the Applicant to evidence the contrary.

With regard to the NCO:OH equivalent ratio limitations set forth in claims 23 and 24, although Markusch et al., does not explicitly teach the claimed ratios, however it would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the NCO: OH ratios to achieve a desirable balance of composition properties. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233

With regard to the claimed amount of propylene oxide adduct recited in claims 19b) and 32b), part i, Markusch et al., fails to explicitly the claimed range of 5 to 15 parts, however it would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the amount of amine containing propylene oxide adduct to achieve a balance of properties within the mixture. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233

With regard to the molecular weight limitations set forth in claims 20 and 32, Markusch et al., fails to explicitly teach the claimed ranges, however it would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the molecular weight of each component as a function of desired functionality (i.e., viscosity, weight) and intended end use. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617, 617 F 2d 272,205 USPQ 215

11. Claims 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Markusch et al., US 5,558,917 as applied to claim 2 above, and further in view of Turner et al., US 4,853,054.

Markusch et al., fails to teach the amount of polyurethane composition applied to the substrate, however, the patent issued to Turner et al., teaches a polyurethane composition also suitable for carpet backings, and other various substrates such as non-wovens, scrims, and wovens (Title and Column 7, 25-35). Turner et al., teaches applying a uniform layer polyurethane composition to the substrate in amount ranging from 5 to about 500 ounces per square yard, which is equivalent to .17 kg/m^2 to about 16.95 kg/m^2. Turner teaches that the polyurethane backing coating imparts good tensile, elongation, tear, low residual tack and high dimensional stability properties to various textiles (Column 1, 10-40). Therefore, motivated by the desire to provide a textile article having good tensile, elongation, tear, low residual tack and high dimensional stability properties it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the teachings of Turner et al., when coating the textile article Markusch et al.

12. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Markusch et al., US 5,558,917 as applied to claim 1 above.

Markusch et al., does not expressly state the thickness of the polyurethane coated substrate however, it would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the thickness of the polyurethane coated substrate as a matter of the intended final use. It has been held that where the general conditions of a claim are

disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynda M Salvatore whose telephone number is 703-305-4070. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

ls
August 25, 2003

CHERYL A JUSKA
PRIMARY EXAMINER